REMARKS

Claims 1 has been amended, and claims 4-6, 8-10 and 21-31 have been cancelled without prejudice. No new matter has been added by virtue of the amendments. For instance, support for the amendment of claim 1 appears e.g. at page 15, second paragraph and the original claims of the application.

Applicants file an Information Disclosure Statement herewith.

Applicants respond to the prior Office Action as follows.

Claims 21-31 were rejected under 35 U.S.C. 112, second paragraph.

Claims 21-31 have been cancelled without prejudice herein. It is thus believed the rejection has been obviated.

Claims 1-10 and 21-31 were rejected under 35 U.S.C. 103 over Meltzer (U.S. Patent 6,547,946) in view of Akram et al. (U.S. Patent 5,893,966) and CRC Handbook of Chemistry and Physics. The rejection is traversed.

Claim 1 (the only pending independent claim) calls for:

A method for depositing multiple metal layers on a semiconductor microchip wafer substrate, comprising:

(a) contacting a semiconductor microchip wafer substrate with an electrolytic plating composition, the plating composition comprising:

(i) a copper metal source and

(ii) a second metal source distinct from the (i) copper metal source and that is chosen from among zinc, tantalum, beryllium, magnesium, titanium, tin, palladium,

silver, cadium, or a copper alloy that comprises one or more of zinc, tantalum, beryllium, magnesium, titanium, tin, palladium, silver and cadium;

(b) electrolytically depositing a first metal layer of copper, from the copper metal source, on the semiconductor microchip wafer substrate at a first reduction potential;

(c) electrolytically depositing a second metal layer, from the second metal source, on the semiconductor microchip wafer substrate at a second reduction potential at least 0.2 V different distinct from the first reduction potential,

wherein the first metal layer functions as an electrical circuit, and the second metal yaer functions as an insulator layer.

The cited documents, whether considered alone or in combination, clearly fail to teach or suggest such methods as Applicants disclose and claim.

The entire thrust of the Melzer document is to treatment of **printed circuit boards** with copper and **nickel**. Nowhere does Melzer disclose or otherwise suggest plating on substrates other than printed circuit boards, or plating second metals other than nickel.

In clear distinction, Applicants' claims call for plating a *semiconductor chip substrate* with zinc, tantalum, beryllium, magnesium, titanium, tin, palladium, silver, cadium, or a copper alloy that comprises one or more of zinc, tantalum, beryllium, magnesium, titanium, tin, palladium, silver and cadium, *i.e. metals other than nickel.*

The secondary citations fail to remedy such deficiencies of Melzer. For instance, Akram et al. **does not identify any specific metals** being deposited by the reported method.

In view thereof, reconsideration and withdrawal of the rejection is requested. See, for instance, Section 2143.03 of the Manual of Patent Examining Procedure ("To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by

the prior art.").

It is believed the application is in condition for immediate allowance, which action is earnestly solicited.

Respectfully submitted,

Peter F. Corless (Reg. 33,860)
EDWARDS & ANGELL, LLP
P.O. Box 9169
Boston, MA 02209
(617) 439-4444